Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BU[illegible]TION

PERMIT

Please Read Application And Notes, If Any, Attached

Permit Number: 100527

This is to certify that 28 MONUMENT SQUARE L[illegible]/Seacoa[illegible]

has permission to install a fire Alarm

AT 27 MONUMENT SQ C[illegible]027 F002004

provided that the person or persons, fi[illegible] or co[illegible]tion ac[illegible]pting this permit shall comply with all of the provisions of the Statutes of Ma[illegible]e and of the [illegible]nces of the City of Portland regulating the construction, maintenance and us[illegible]f buildings and str[illegible]res, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Not[illegible]ation o[illegible]spectio[illegible]must b[illegible] give[illegible]nd writt[illegible]permissi[illegible]procure[illegible] befo[illegible]this bu[illegible]g or p[illegible]hereof i[illegible] lath[illegible] or oth[illegible]sed-in. 2[illegible] HO[illegible] NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. [illegible]

Health Dept. _____

Appeal Board _____

Other _____

Department Name

PERMIT ISSUED

JUN 15 2010

Director - Building & Inspection Services

City of Portland

PENALTY FOR REMOVING THIS CARD

CITY OF PORTLAND, MAINE
Department of Building Inspections

Original Receipt

5.12 2010

Received from Seacoast

Location of Work 22/28 Monument

Cost of Construction $_____ Building Fee: _____

Permit Fee $_____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

Building (IL) ___ Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other Fire Alarm 160
55

CBL: 27-F-2

Check #: CC **Total Collected $** 215.

No work is to be started until permit issued.
Please keep original receipt for your records.

Taken by: _____

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

865-0394
ext 505

CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

5-17 20 10

Received from Seacoast

Location of Work 22 - Monument

Cost of Construction $ _____ Building Fee: _____

Permit Fee $ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 55

Building (IL) ___ Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other _____

CBL: 22-F-2

Check #: CC Total Collected $ 55

No work is to be started until permit issued.
Please keep original receipt for your records.

Taken by: [signature]

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Issue Date:	CBL:
10-0527		027 F002004

Location of Construction:	Owner Name:	Owner Address:	Phone:
27 MONUMENT SQ	28 MONUMENT SQUARE LLC	22 MONUMENT SQ	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Seacoast Security	P.O. Box K 4 Summer Street Freeport	2078650394
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Fire Alarm System	B-3

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Multi-use Connecjjted w/ electric permit# 20104300	Multi-use - install a fire Alarm	$160.00	$13,593.00	1

FIRE DEPT: ☒ Approved w/conditions ☐ Denied

6/15/10

Signature: BJ Walsh

INSPECTION: Use Group: M/A/R Type: Fire Alarm IBC-2003

Signature: JMB 6/15/10

Proposed Project Description:
install a fire Alarm

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	05/17/2010

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

PERMIT ISSUED

JUN 15 2010

City of Portland

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☐ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: 5/19/10	Date:	Date:

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | DATE | PHONE

City of Portland, Maine - Building or Use Permit
389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Date Applied For:	CBL:
10-0527	05/17/2010	027 F002004

Location of Construction:	Owner Name:	Owner Address:	Phone:
27 MONUMENT SQ	28 MONUMENT SQUARE LLC	22 MONUMENT SQ	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Seacoast Security	P.O. Box K 4 Summer Street Freeport	(207) 865-0394
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Fire Alarm System	

Proposed Use:	Proposed Project Description:
Multi-use - install a fire Alarm	install a fire Alarm

Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 05/19/2010
Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 06/15/2010
Note: **Ok to Issue:** ☑

1) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm HVAC systems, heating appliances, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
2) Fire Alarm systems shall be installed per Sec. 907 of the IBC 2003

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Ben Wallace Jr. **Approval Date:** 06/15/2010
Note: **Ok to Issue:** ☑

1) Detectors shall be listed for the environment which they are installed, including air velocity. On floors 1, 2 and basement of 28 Monument Square, non-required wireless smoke detectors may be removed if desired.
2) All spaces including first floor tenants at 22 Monument Square shall be covered by the fire alarm system.
3) Fire alarm system requires a wireless master box connection per city ordinance.
Masterbox design and installation shall be as approved be City Electrical Division.
4) The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.
5) Installation of a Fire Alarm system requires a Knox Box to be installed per city crdinance
6) Central Station monitoring for addressable fire alarm systems shall be by point.
7) As-built documents shall be submitted in pdf to the Building Inspections Office upon completion of job. This includes floor plans for 22 Monument Square.
8) All smoke detectors and smoke alarms shall be photoelectric. Carbon Monoxide detectors are required in the dwelling units by State law.
9) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
10 All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS". Records cabinate, FACP, annunciator(s), and pull stations shall be keyed alike.

PERMIT ISSUED

JUN 15 2010

City of Portland

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the City of Portland Inspection Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months, if the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue with construction.**

__X__ **Final inspection required at completion of work.**

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

PERMIT ISSUED

JUN 15 2010

City of Portland

CBL: 182 C004001 **Building Permit #:** 10-0634

Fire Alarm Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: 22 & 28 MONUMENT SQ CBL: 27-F-2004

Exact location: (within structure) BUILDING WIDE - FACP IN BASEMENT MECHANICAL RM.

Type of occupancy(s) (NFPA & ICC): NFPA

Building owner: H. ALAN MOONEY

Must be System Designer (point of contact): CHRIS BROWN - LOU GARZA

Designer phone: 207-865-0394 E-mail: CHRISB @ SEACOASTSECURITY.Com

Installing contractor: SEACOAST SECURITY Certificate of Fitness No: 10-0263

Contractor phone: 207-865-0394 E-mail: LOUG @SEACOASTSECURITY.Com

This is a new application: YES ◉ NO ◯

This is an amendment to an existing permit: YES ◉ NO ◯ Permit no: ____________

The following documents shall be provided with this application:

- [x] Floor plans
- [x] Wiring diagram
- [x] Annunciator details
- [x] Equipment data sheets
- [x] Battery & voltage drop calculations
- [x] Input/ Output Matrix
- [x] Designer qualifications
- [x] Electrical Permit Pulled (check alarm/com)

COST OF WORK: 13,593

PERMIT FEE: 160

($10 PER $1,000 + $30 FOR THE FIRST $1,000)

RECEIVED

MAY 1 ... 20..

... Inspections ... Maine

The designer shall be the responsible party for ... **www.portlandmaine.gov/fire for every submittal.** ... **plans to the Building Inspections Department, 389 Cong**...

Prior to acceptance of any fire alarm system, ... ated with all fire system contractors and the Fire Departmen...

All installation(s) must comply with the *City of Portla*... *he Protection of Life and Property*, available at www.portlandmaine.gov/fire .

Applicant signature: Christopher H. Brown Date: 5-..-10

Form # P 01

ELECTRICAL PERMIT
City of Portland, Me.

To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 5-14-10
Permit # 2010 4500
CBL# 27-F-2

LOCATION: 22/28 MON. SQ. **METER MAKE & #**
CMP ACCOUNT # **OWNER** H. ALAN MOONEY
TENANT MULTIPLE/MIXED PUBLIC MARKET **PHONE #** 207-828-1969

						TOTAL	EACH FEE
OUTLETS	Receptacles		Switches		Smoke Detector		.20
FIXTURES	Incandescent		Fluorescent		Strips		.20
SERVICES	Overhead		Underground		TTL AMPS	<800	15.00
	Overhead		Underground			>800	25.00
Temporary Service	Overhead		Underground		TTL AMPS		25.00
							25.00
METERS	(number of)						1.00
MOTORS	(number of)						2.00
RESID/COM	Electric units						1.00
HEATING	oil/gas units		Interior		Exterior		5.00
APPLIANCES	Ranges		Cook Tops		Wall Ovens		2.00
	Insta-Hot		Water heaters		Fans		2.00
	Dryers		Disposals		Dishwasher		2.00
	Compactors		Spa		Washing Machine		2.00
	Others (denote)						2.00
MISC. (number of)	Air Cond/win						3.00
	Air Cond/cent				Pools		10.00
	HVAC		EMS		Thermostat		5.00
	Signs						10.00
	Alarms/res						5.00
	Alarms/com	X					15.00
	Heavy Duty(CRKT)						2.00
	Circus/Carnv						25.00
	Alterations						5.00
	Fire Repairs						15.00
	E Lights						1.00
	E Generators						20.00
PANELS	Service		Remote		Main		4.00
TRANSFORMER	0-25 Kva						5.00
	25-200 Kva						8.00
	Over 200 Kva						10.00
					TOTAL AMOUNT DUE		
	MINIMUM FEE/COMMERCIAL		55.00		**MINIMUM FEE**		45.00

RECEIVED
MAY 17 2010
Dept. of Building Inspections
City of Portland Maine

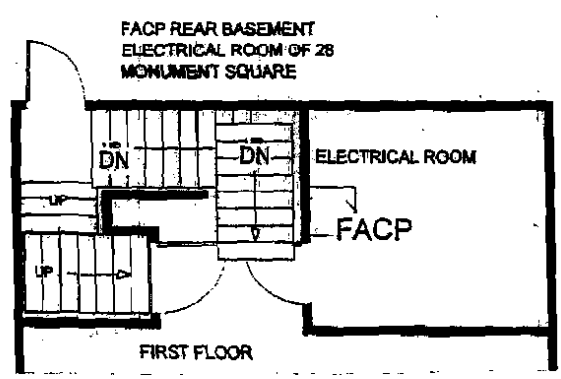
CONTRACTORS NAME SEACOAST SECURITY **MASTER LIC. #** ML 60009638
ADDRESS 4 SUMMER ST, FREEPORT **LIMITED LIC. #**
TELEPHONE 207-865-0394

SIGNATURE OF CONTRACTOR Christopher H. Brown

White Copy - Office • **Yellow Copy - Applicant**

SEACOAST SECURITY
4 Summer Street
P.O. Box K
Freeport, ME 040

Area	Zone	Description
*	5	Kitchen Heat – Basement / 28 Mon. Sq.
*	6	Kitchen Hood – Basement / 28 Mon. Sq.
*	7	Duct Smoke – 1st. Floor Rear / 28 Mon. Sq.
*	9	Basement Rear Hall Smoke / 28 Mon. Sq.
*	10	Basement Middle Hall Smoke / 28 Mon. Sq.
*	11	Basement Front Hall Smoke / 28 Mon. Sq.
*	12	Front Doors Pull / 28 Mon. Sq.
*	13	Rear Door Pull / 28 Mon. Sq.
*	14	Basement Front Pull / 28 Mon. Sq.
*	15	Basement Rear Pull / 28 Mon. Sq.
*	16	1st Floor Front East Smoke / 28 Mon. Sq.
*	17	1st Floor Front West Smoke / 28 Mon. Sq.
*	18	1st Floor Middle East Smoke / 28 Mon. Sq.
*	19	1st Floor Middle West Smoke / 28 Mon. Sq.
*	20	1st Floor Rear East Smoke / 28 Mon. Sq.
*	21	1st Floor Rear West Smoke / 28 Mon. Sq.
*	22	Bsmnt./Electrical Rm./Panel/Smoke/ 28 Mon. Sq.
*	23	2nd Floor East Smoke / 28 Mon. Sq.
*	24	2nd Floor West Smoke / 28 Mon. Sq.
*	25	2nd Floor Middle East Smoke / 28 Mon. Sq.
*	26	2nd Floor Middle West Smoke / 28 Mon. Sq.
*	27	2nd Floor Rear East Smoke / 28 Mon. Sq.
*	28	2nd Floor Rear West Smoke / 28 Mon. Sq.
*	29	2nd Floor Rear Middle Smoke / 28 Mon. Sq.
*	37	2nd Floor Front Pull Station / 28 Mon. Sq.
*	38	2nd Floor Rear Pull Station / 28 Mon. Sq.
*	39	1st Floor Elevator Smoke / 28 Mon. Sq.
*	40	2nd Floor Elevator Smoke / 28 Mon. Sq.
*	41	Basement Elevator Smoke / 28 Mon. Sq.
*	42	4th Floor Elevator Smoke / 28 Mon. Sq.
*	43	Machine Room Elevator Smoke / 28 Mon. Sq.
*	44	3rd Floor Elevator Smoke / 28 Mon. Sq.
*	45	Machine Room Elevator Heat / 28 Mon. Sq.
*	46	Machine Room Elevator Heat / 28 Mon. Sq.
*	47	Top of Elevator Shaft Smoke / 28 Mon. Sq.
*	48	Elevator Machine Rm Sprnkler Tamper/28 MonSq
*	49	5th Floor Rear Pull Station / 28 Mon. Sq.
*	50	4th Floor Rear Pull Station / 28 Mon. Sq.
*	51	4th Floor Side Pull Station / 28 Mon. Sq.
*	52	3rd Floor Rear Pull Station / 28 Mon. Sq.
*	53	3rd Floor Side Pull Station / 28 Mon. Sq.
*	54	22 Monument Square Sprinkler Waterflow
*	55	22 Monument Square Sprinkler Tampers(3/9/10DISABLE
*	56	22 Monument Square Bsmnt Elevator Machine Rm Smoke
*	57	22 Monument Square Bsmnt Elevator Machine Rm Heat
*	58	22 Monument Square 1st Floor Entry Pull
*	59	22 Monument Square 1st Floor Elevator Smoke
*	60	22 Monument Square 2nd Floor Front Pull
*	61	22 Monument Square 2nd Floor Elevator smoke
*	62	22 Monument Square 2nd Floor Rear Pull
*	63	22 Monument Square 3rd Floor Front Pull
*	64	22 Monument Square 3rd Floor Elevator Smoke
*	65	22 Monument Square 3rd Floor Rear Pull
*	66	22 Monument Square 4th Floor Front Pull
*	67	22 Monument Square 4th Floor Elevator Smoke
*	68	22 Monument Square 4th Floor Rear Pull
*	69	22 Monument Square 5th Floor Front Pull
*	70	22 Monument Square 5th Floor Elevator Smoke
*	71	22 Monument Square 5th Floor Rear Pull
*	72	22 Monument Square 6th Floor Front Pull
*	73	22 Monument Square 6th Floor Elevator Smoke
*	74	22 Monument Square 6th Floor Rear Pull
*	76	Aes Radio Bypass
*	78	28 Monument Sq. Sprinkler Waterflow In Basement Of 22 Monument Sq..
*	79	22 Monument Square 1st Floor Stair Smoke above Power Supply Panel
*	806	Aes Radio Relay Trouble



(207) 865-0394 • Fax (207) 865-0852 • Inside Maine (800) 206-7906 • Outside Maine (800) 210-5723
Owned & Operated In State 24 Hour Central Station
www.seacoastsecurity.com

SEACOAST SECURITY
4 Summer Street
P.O. Box K
Freeport, ME 04032

To: Ben Wallace, Jr., Fire Prevention Officer
Portland Fire Dept.

Re: Fire Alarm sequence of operation May 7, 2010

Whenever an initiating device, smoke detector, heat detector or manual pull station is activated, this in turn will sound all of the notification devices throughout the building. The notification devices consist of horn/strobes and strobe only in the common areas and mini sounders in all of the apartment bedrooms.

The procedure for the Fire Dept. when they arrive on site will be to go to the keypad annunciator location pre-determined by the Fire Dept. to pinpoint the area of the building the alarm has occurred. Each initiating device has its own specific zone number and description to easily locate alarm origins.

To silence the notification devices, a code of "12341" will need to be entered at the keypad. To reset alarms, repeat the same procedure.

KEYPAD ANNUNCIATOR DETAILS

PROCEDURES TO FOLLOW IN THE EVENT OF A FIRE ALARM:

1) IF AN ACTUAL ALARM OCCURS, EVACUATE THE PREMISES IMMEDIATELY! DO NOT SHUT OFF OR RESET THE SYSTEM. WAIT FOR THE FIRE DEPARTMENT TO RESPOND.

PROCEDURES TO FOLLOW IF THE ALARM IS ACTIVATED INADVERTENTLY OR BY TESTING:

1) WHEN SYSTEM IS IN ALARM, GO TO THE KEYPAD AND DETERMINE THE LOCATION OF THE ALARM. THE KEYPAD IS PROGRAMMED WITH ENGLISH DISPLAY FOR EASY NOTIFICATION.

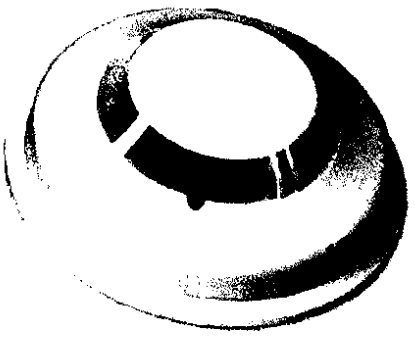
2) ENTER IN THE PRE-DESIGNATED FOUR DIGIT CODE "1234" FOLLOWED BY THE "OFF {#1}" KEY. THIS WILL SILENCE THE ALARM.

3) ONCE THE ALARM DEVICE HAS BEEN RESET, FOLLOW THE SAME PROCEDURE IN STEP #2. THIS WILL RESET THE SYSTEM TO ITS NORMAL STATE.

Honeywell

5192SD/5192SDT

V-PLEX® SMOKE DETECTOR



The Honeywell 5192 Series low profile, addressable V-Plex smoke detectors deliver state-of-the-art features and benefits in a cost-effective package. These detectors are designed to provide open area coverage and are compatible with Honeywell's VISTA controls supporting V-Plex technology.

An LED on the detector will blink periodically during normal conditions, remain on steady during alarm and cease to pulse if the chamber is out of acceptable sensitivity range.

An extremely powerful feature available within the 5192 Series is the Automatic Maintenance Alert/Reporting capability – a feature normally found in today's high end analog addressable systems. The detectors continually monitor their own sensitivity levels in addition to the basic normal and alarm conditions. These HIGH and LOW SENSITIVITY signals are communicated back to the control, via the V-Plex addressable loop, to indicate locally and at the central station that the detector may not be able to detect smoke or may false alarm. This feature works with VISTA-32FB, 128BP, 128FBP, 250BP, 250FBP, 40, 50P, 100-24 and FAP FA1600C, FA1660C and FA1700C. More important is the cost saving associated with Automatic Maintenance Reporting. The feature is an approved alternate to NFPA 72 field sensitivity calibration testing that require external test meters. This eliminates the need to schedule inspections to determine detector sensitivity/viability. Another important benefit of these V-Plex (addressable) smoke detectors is their ability to operate on existing wiring.

There is no need to run special twisted pair, data grade or shielded wires, providing you with the right choice for all your retrofit applications. That equates to cost savings in time and materials!

FEATURES

- Low profile design
- V-Plex addressable loop device
- Automatic maintenance reporting
- Available with integral heat sensor
- Simple 2 wire installation
- DIP switch or serial number programmable
- Lines on existing or conventional wiring

APPLICATIONS

The 5192 Series smoke detectors are designed to provide open area coverage and are well suited for most fire detection applications. These smoke detectors are compatible with all Honeywell VISTA Fire and Burglary controls that support V-Plex addressable loop technology. These agency listed alarm initiating devices support most commercial and residential applications. They are suited for use in museums, hospitals, day care centers, retail stores, strip malls, schools, libraries, fast food chains, medical or professional office suites and in factory and warehouse environments.

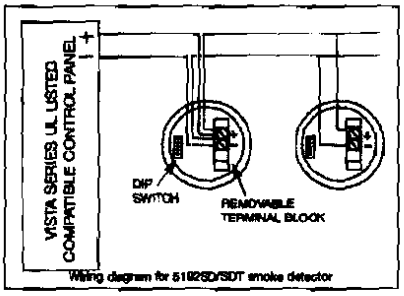
5192SD/5192SDT

V-PLEX™ SMOKE DETECTOR

SPECIFICATIONS

Installation

The 5192 Series smoke detectors are supplied with a convenient mounting bracket that allows the detector to be mounted to a variety of electrical junction boxes. A removable terminal block, that accepts 14 to 22 gauge wire to provide easy wiring connections. The detectors are designed to meet all applicable requirements for UL Commercial and Residential Fire installations as well as NFPA 72 requirements when installed in compliance with the National Electric Code and approved/listed control panels.



Wiring diagram for 5192SD/SDT smoke detector

Compatibility

These smoke detectors are compatible with all VISTA control panels that support V-Plex (addressable) polling loop technology. The detectors support DIP switch or serial number addressing. DIP switch configuration are compatible with 5140XM, VISTA-40, and VISTA-50P controls.

Serial number addressing is supported on VISTA-32FB, 128BP, 128FBP, 250BP, 250FBP, 100-24 and FAP FA1600C, FA1660C and FA1700C controls. (Refer to control panel and smoke detector installation instructions for details.)

Automatic Maintenance Reporting Compatibility

The automatic maintenance feature is compatible with the following control panels:

- VISTA-32FB
- VISTA-128BP
- VISTA-128FBP
- VISTA-250BP
- VISTA-250FBP
- FA1600C
- FA1660C
- FA1700C

The automatic maintenance may be disabled for all other controls that do not support this feature. Refer to control panel and smoke detector installation instructions for details.

Electrical:

- System voltage range: 7-14 V
  Standby current (maximum @ 12V):
  - LED off: 1.2mA
  - LED on: 2.8mA

Mechanical:

- Diameter: 5.5 inches (140mm) (including mounting bracket)
- Height: 1.7 inches (43mm) (including mounting bracket)
- Weight: 5.3 ounces (150 grams)

Environmental:

- Installation temperature range: 32° to 100°F (0° to 38°C)
- Installation humidity range: 10% to 93% RH, non-condensing
- Heat sensor (5192SDT only): 135°F fixed temperature electronic thermistor
- EMI: Meets or exceeds the following requirements:
  - FCC Part 15, Class B Device
  - IEC EMC Directive

Agency Listings

- UL268 Commercial System Smoke Detector
- Meets UL 217 Requirements for Residential

ORDERING

5192SD	**Addressable Photoelectric Smoke Detector**
5192SDT	**Addressable Photoelectric Smoke Detector with Integral Heat Sensor**

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
Melville, NY 11747
1.800.467.5875
www.honeywell.com

Honeywell

U5192/D
May 2009

5881ENHC

COMMERCIAL WIRELESS RECEIVER

The new 5881ENHC RF Receiver is designed for use with control panels that are approved for use in commercial fire and/or burglary installations. The receiver recognizes alarm, status and keypad control messages from wireless transmitters operating at 345 MHz. The receiver also features a Spatial Diversity System that virtually eliminates "nulls" and "dead spots" within the coverage area.

FEATURES

- Front and back tamper for commercial fire/burg installations
- One or two receivers can be used to provide redundant coverage or extend coverage in large areas
- Spatial Diversity System virtually eliminates "nulls" and "dead spots" within the coverage area
- Can be mounted remotely, anywhere on the keypad bus, for extended coverage
- Compatible with all 5800 series wireless devices
- Connects to control panel via the keypad bus
- UL listed for Commercial Fire/Burg applications

COMPATIBLE CONTROLS

- VISTA-32FB
- VISTA-128BP
- VISTA-128FBP
- VISTA-250BP
- VISTA-250FBP
- FA1600 series
- FA1700 series

SPECIFICATIONS

Dimensions

- 7-3/8" W x 4-3/8" (10-7/8" with antennas) H x 1-7/16" D 186mm W x 112mm H (277mm with antennas) x 37mm D

Input Voltage

- 12VDC (from control's keypad terminals)

Current

- 60mA (typical)

Operating Temperature

- 32° F to 122° F (0° C to 50° C)

Interface Wiring

- RED: 12VDC Input (+) Aux. power
- GREEN: Data out to control
- YELLOW: Data in from control
- BLACK: Ground (-)

Range

- 200 ft (60m) nominal indoors from wireless transmitters (the actual range to be determined with the security system in the Test mode)

Installation

- See product installation instructions for details on programming and mounting

UL Listings

- Commercial Fire UL 864
- Household Fire UL 985
- Household Burg UL 1023
- Commercial Burg UL 365, UL 609, UL 1076, UL 1610
- FM
- MEA
- CSFM

ORDERING

5881ENHC Commercial Wireless Receiver

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747

www.honeywell.com

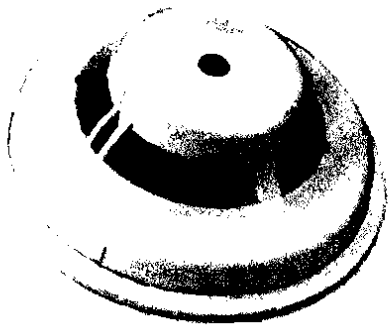
Honeywell

L/5881ENHC/D
October 2008

Honeywell

5808LST

WIRELESS SMOKE/HEAT DETECTOR



The powerful 5808LST is a combination wireless photoelectric smoke and heat detector that trips when temperatures reach 135° F. Ideal for difficult to wire locations, situations where room aesthetics are critical or where hazardous materials exist, the 5808LST provides the ultimate in installation flexibility.

Remarkably cost-effective, the attractive, low profile unit blends easily with any décor and provides benefits rarely found in smoke detectors in this price range. Smart Check™ remote maintenance reporting automatically alerts the central station when it is in need of service, and built-in drift compensation continuously corrects sensitivity variances caused by dust. The 5808LST is UL 268 listed for use in both commercial and residential applications.

FEATURES

- Low profile housing
- Extended battery life - Two 3V Lithium
- Automatic drift compensation
- Smart Check™ - pre-alarm maintenance signal
- Test/alarm silence button - Immediate signal 2.5 sec delay horn activation
- Field replaceable chamber
- Heat Detector - dual 135° thermistors
- Low temperature alert signal
- Temporal Code 3 sounder
- Pre-Low battery signal to central station (if applicable) seven days prior to horn chirp
- UL 268 - Commercial and Residential

SPECIFICATIONS

Electrical

- Two-volt CR123A lithium batteries (included). Replace with Duracell® DL123A, Sanyo® CR123A, Panasonic® CR123A, ADEMCO 466, or Varta CR123
- Hot sensitivity: 0.65% + 0.15% per foot
- Cold sensitivity: less than 6% per foot
- 2.5 inches (14 cm)
- 5.5 inches (64 mm)
- 0.7 lb. (310 g)
- 4.4° to 37.8°C (40° to 100°F
- 5% to 95% relative humidity
- 135°F fixed temperature electronic thermistors
- 45°F fixed temperature electronic thermistors

Agency listings

- UL 268 - commercial and residential installations

(over)

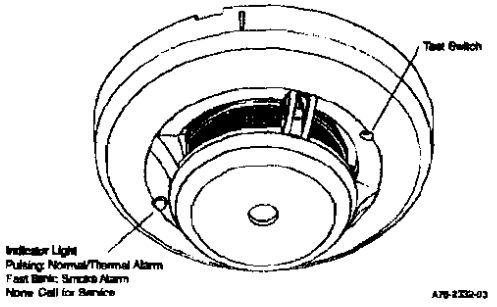
5808LST

WIRELESS SMOKE/HEAT DETECTOR

SPECIFICATIONS

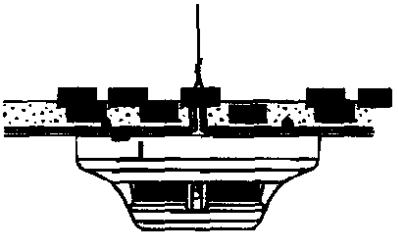
Mounting Instructions

First, determine the best location for the smoke detector — that provides strong wireless transmission paths and proper smoke detection. A good transmission path must be established from the proposed mounting location before permanently installing the detector.



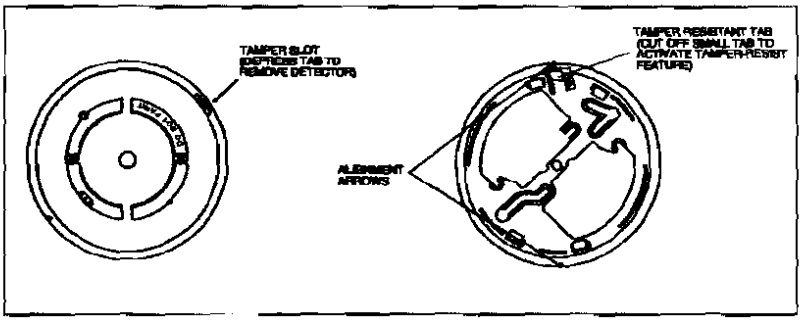
To mount the detector:

1. Install the mounting bracket on the ceiling or on the wall (if local ordinances permit). Use the two screws and anchors provided.



2. Prior to mounting the detector to the mounting bracket, the system must "enroll" the detector's ID.

3. Turn the detector in a clockwise direction in the mounting bracket until it clicks into place.



4. Test the detector immediately after completing the installation and refer to the control system's instructions for additional information concerning the use of wireless smoke detectors.

ORDERING

5808LST Smoke/Heat Detector with Sounder

Honeywell Security & Custom Electronics
Honeywell International Inc.
PO Box 9035
Syosset, NY 11791
www.honeywell.com

RE06046
U5808LST/D
September 2006

Honeywell

Honeywell

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

Now UL864 9th Edition Approved

Designed to integrate seamlessly with CCTV, access control and Honeywell's full range of fire and burglary components, the new VISTA-128FBP provides the ultimate protection of life and property. The UL Listed commercial fire and burglary control panel supports up to eight partitions and up to 128 zones/points using hardwired, wireless and V-Plex® addressable technologies. A diverse line of Honeywell initiating devices, notification circuits, communication devices, keypads, RF receivers and relays are also supported. The VISTA-128FBP has been designed to mount quickly and easily in an attack resistant cabinet, and is available in 12V and 24V models.

FEATURES

- Eight hardwired zones standard, expandable to 120 V-Plex addressable points/zones or 128 wireless points/zones
- Can control eight separate areas independently (8 partitions)
- Supports commercial wireless fire and burglary devices
- Stores up to 512 events
- Accommodates 150 user codes and up to 250 access card holders using VistaKey
- Supports V-Plex addressable VistaKey access control (1 to 8 doors)
- Two on-board notification (bell) circuits delivering 2.3A @ 12V or 3.4A @ 24V
- Automatic smoke detector sensitivity maintenance testing
- Four-wire smoke reset using onboard J2 output trigger
- Supports Dynamic Signaling for AlarmNet Communicators
- Supports Remote Control via the Internet*
- Supports Internet Alarm Reporting*
- Supports Graphical User Interface Consoles
- Listed to UL864 9th Edition
- Upload/download via Ethernet*
- Carbon monoxide (CO) zone support

** When used with AlarmNet devices.*

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND
BURGLARY ALARM CONTROL PANEL

Honeywell

ADDITIONAL FEATURES

- Notification Appliance Circuits (two):
  - Programmable
  - Temporal code compliant
  - Individually silenceable
- Programmable on-board auxiliary relay
- False alarm reduction features:
  - Exit error logic
  - Exit delay reset
  - Cross zoning
  - Call waiting defeat
  - Recent close report
- Supports commercial hardwired, addressable V-Plex polling loop and wireless zones
- Hardwired zones
  - Provides eight style B hardwired zones
  - EOLR supervised for Fire and UL burglary installations
  - Supports N.O. or N.C. sensors
  - Individually assignable to any eight partitions
  - Up to 32 two-wire smoke detectors each on zone one and two (64 total)
  - Up to 50 two-wire glassbreak detectors on zone eight
- Patented addressable V-Plex polling loop technology
  - Supports 120 two-wire zones points
  - Global polling technology for faster processing
  - Supervised by panel
  - Zones individually assignable to partitions, notification circuit (bell) output or auxiliary relay
  - 4,000 ft. capability without the use of shielded cable
  - Extender/Isolation bus modules
  - Eight zone – Class A and B expander module
  - Eight zone – Class B expander module
  - One zone supervised contact monitor module
- UL Listed wireless expansion
  - Supports up to 128 wireless zones/points
  - Supervised by control for check-in signals
  - Tamper protection for transmitters
  - Individually assignable up to eight partitions
  - Supports commercial wireless smoke detectors
- Access Control Integration
  - Full integration with PassPoint Access Control System Complete Gateway interface of VISTA and access functions
- Up to eight doors using VistaKey V-Plex Access Control
- Event reporting
- Local printer of access or VISTA related events
- Communication
  - Phone mapping by zone response type
  - Panel operation during download

Honeywell

SPECIFICATIONS

Applications

The VISTA-128FBP control is well suited for a variety of applications as an integrated fire and burglary control. A diverse line of Honeywell initiating devices supports this extremely powerful control. Some of the applications supported are: medical and professional buildings, churches or synagogues, office buildings, schools, strip malls, larger residences and factory or warehouse environments.

Electrical

- Primary power: 18VAC @ 72VA Honeywell No. 1451
- Control panel quiescent current draw: 300mA
- Backup battery:
  - 12VDC, 12AH min to 34.4AH max
  - Lead acid battery (gel type)
- Alarm power: 12VDC, 1.7A max for each notification (bell) circuit output Total 2.3A @ 12V
- Aux. standby pwr: 12VDC, 1A max
- Total power: 2.3A at 12VDC, 3.4A at 24VDC from all sources
- Standby time: 24 hours with 1A standby load using 34.4AH battery
- Fusing: Battery input, aux. and notification (bell) circuit outputs are protected using PTC circuit protectors. All outputs are power limited.
- Optional 24-volt power supply, PS 24 supplies two 24 VFW, 1.7A full wave rectified, unfiltered outputs

Main Dialer

- Line seize: Double Pole
- Ringer equiv.: 0.7B
- Formats: ADEMCO Low Speed, ADEMCO 4+2 Express, ADEMCO High Speed, ADEMCO Contact ID, Sescoa and Radionics
- Dual phone line capability (using 5140DLM module)

Cabinet dimensions

- 18" H x 14.5" W x 4.3" D

Environmental

- Storage temp: 14° F to 158° F (-10° C to 70° C)
- Operating temp: 32° F to 122° F (0° C to 50° C)
- Humidity: 85% RH
- EMI: Meets or exceeds the following requirements:
  - FCC Part 15, Class B Device
  - FCC Part 68
  - IEC EMC Directive

Agency Listings

- UL609 Grade A Local Mercantile Premises and Mercantile Safe and Vault
- UL611/1610 Grades A, AA, Central Station
- UL365 Grades A, AA Police Connect
- UL864/NFPA72 Local, Central Station and Remote Station
- UL985
- Factory Mutual
- California State Fire Marshal
- MEA
- CAN/ULC S304 – Central and Monitoring Station Burglar Alarm Unit
- CAN/ULC S527 – Central Unit for Fire Alarm Systems
- CAN/ULC S303 – Local Burglar Alarm Unit
- CAN/ULC S525 – Audible Signal Appliances

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

COMPATIBLE DEVICES

Auxiliary Devices
- 6160CR-2 – Red Alpha Keypad
- 4204 – Relay Module, four form C contacts
- 4204CF – Two supervised output circuits
- 5881 Series RF receiver
- 5883H RF receiver
- 6220S – System printer used with 4100SM serial module
- 6160CR-2 – Red Fire Keypad
- 6160 – Burglary Keypad

Two-Wire Smoke Detectors Conventional
- System Sensor
- ESL
- DSC

Horn/Strobes
- System Sensor
- Wheelock
- Gentex

Manual Pull Stations
- 5140MPS-1
- 5140MPS-2

V-Plex (Addressable) Devices
- 4208U Loop Expansion Module – eight zones
- 4101SN Single Relay/Zone Module
- 4208SNF Class A/B Expander Module
- 4190SN Remote Point Module – two zones
- 4193SN Two-Zone Serial Interface Module
- VSI Module
- 4293SN One-Zone Serial Interface Module

V-Plex Extender/Isolation Modules
- 4297 Extender/Isolator Module
- VSI Isolator Module

V-Plex Smoke Detectors:
- 5193SD
- 5193SDT

V-Plex Passive Infrared Detectors
- 998MX
- IS2500SN
- DT7500SN

V-Plex (Addressable) Contacts
- 4939SN-WH
- 4944SN-WH
- 4959SN

V-Plex Glassbreak Detectors
- FG1625SN

Optional 24V Power Supply
- PS24 – 24V power supply – 3.4A

Commercial Wireless Devices
- 5808W3 – Photoelectric Smoke/Heat Detector
- 5806W3 – Photoelectric Smoke Detector
- 5809 – Wireless Heat Detector
- 5817CB – Wireless Commercial Transmitter
- 5869 – Hold-Up Transmitter
- 5881ENHC – RF Receiver
- 5883H – RF Receiver

Access Control
- VistaKey V-Plex (addressable) Access Control
- VistaKey-SK Starter Kit
- VistaKey-EX Expansion Kit

Alarm Communications
- 7845I-ENT – Internet/Intranet Communicator
- 7845GSM – Digital Cellular Communicator
- 7845I-GSM – Internet and Digital Cellular Communicator
- GSMCF/IGSMCF – Commercial Fire Communication Kits (when available)

Product specifications subject to change.

ORDERING

V128FBP-0	Commercial Fire and Partitioned Burglary Alarm Control Panel 12V Model
V128FBP0-24	Commercial Fire and Partitioned Burglary Alarm Control Panel 24V Model

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
Melville, NY 11747
1.800.467.5875
www.honeywell.com

Honeywell

LVSTA128FBPD/D
September 2009

Battery & Power Budget Calculator

Facility Information	
Location:	22 & 28 Monument Square
Account #:	8-1059
Model:	v128fbp
Engineer:	Chris Brown
Date:	4/27/2010

Enter Standby and Alarm Times	
Battery Standby (hours):	24
Alarm Duration (minutes):	5
	24.4

Battery Contingency Factor: 10%

SELECTED PANEL MAXIMUM OUTPUT RATINGS

Select Panel from pulldown list:	Polling Loop (mA)	Standby Auxiliary Power (mA)	Alarm Auxiliary Power (mA)	Panel Standby (mA)	Panel Alarm (mA)	Bell #1 Output (mA)	Bell #2 Output (if used; mA)	Maximum Panel Standby Output	Maximum Panel Alarm Output	Max Battery Supported by Panel
Vista-128FBP	128	1000	1700	300	470	1700	1700	1300	2800	34.4
	59.7	531	465			0	0	591	525	
	68.3	469.0	1235.0			1700.0	1700.0	709.3	2275.3	
							0.0			0.0

KEYPADS/INTERFACES	Enter Quantity	How many powered externally?							
	0	0				0	0	0	
	0	0				0	0	0	
	0	0				0	0	0	
6139/6139R	0	0	40	100		0	0	0	
	0	0				0	0	0	
	0	0				0	0	0	
	0	0				0	0	0	
	0	0				0	0	0	
6160/6160CR	3	0	45	150		135	450	0	
6160RF	0	0	50	150		0	0	0	
6160V	0	0	60	190		0	0	0	
6270	0	0	190	280		0	0	0	
6271C	0	0	159	230		0	0	0	
6271CV	0	0	159	230		0	0	0	
6271V	0	0	137	210		0	0	0	
8132 (Symphony)	0	0	350	400		0	0	0	
FSA-8 Fire Zone Annunciator	0	0	35	65		0	0	0	
FSA-24 Fire Zone Annunciator	0	0	35	130		0	0	0	
Add'l Keypd (Enter # and Currents)	0	0	0	0		0	0	0	
Add'l Keypd (Enter # and Currents)	0	0	0	0		0	0	0	

2 WIRE & 4 WIRE SMOKE DETECTORS (except Vplex Polling Loop detectors)	Enter Quantity	How many powered externally?							
2 wire smoke detector (zone powered)	0		*Two-wire smoke detector current is built into the panel budgets. These fields are included to help you create a complete equipment list. The line below indicates if number of detectors exceeds panel capacity, or if the selected panel does not support 2-wire smoke detectors.*						
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0								
12V 4 Wire Smoke (Qnt'y & Currents)	0	0	0	0		0	0	0	
12V 4 wire Smoke (Qnt'y & Currents)	0	0	0	0		0	0	0	
12V 4 wire Smoke (Qnt'y & Currents)	0	0	0	0		0	0	0	
12V 4 wire Smoke (Qnt'y & Currents)	0	0	0	0		0	0	0	

MULTI-POWER DEVICES	Enter Quantity	How many powered externally?							
4208U [powered by polling loop]	0	0							
4208U [powered by panel aux power]	0	0							
4208U [powered externally]	0	0							
4208SN [powered by polling loop]	0	0							
4208SN [powered by panel aux power]	0	0							
4208SN [powered externally]	0	0							
4208SNF [powered by polling loop]	0	0							
4208SNF [powered by panel aux power]	0	0							
4208SNF [powered externally]	0	0							
4208SNF (Class B to A Zone Converter)	0	0	40	0	0	0	0	0	0
4209U Grouped Zone Mux. Module	0	0							
4209U [powered externally]	0	0							
4297 Polling Loop Extender	0	0							
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0	0	0

AUXILIARY POWERED DEVICES	Enter Quantity	How many powered externally?					
PS24 24 volt Power Supply Module	0	0	50	100	0	0	0
4100SM (no more than one per system)	0	0	25	0	0	0	0
4204: Enter no. of relays used	0	0	40	0	0	0	0
4204CF:Enter no. of relays used	2	0	80		160	0	0
4285 Voice Module	0	0	160		0	0	0
4286 with warning speakers	0	0	220	300	0	0	0
5140DLM Backup Dialer Module	1	0	5	15	5	15	0
5800RP wireless repeater module	1	0	100		100	0	0
5800TM wireless xmtr module	0	0	20		0	0	0
5881EN receiver	1	0	60		60	0	0
5883 hi-security receiver	0	0	80		0	0	0
UVS-QM	0	0	75	110	0	0	0
VA8200 Panel Linking Module	0	0	88	0	0	0	0
VA8201 Alpha Pager Module	0	0	165	0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0
7845GSM/7845I-GSM	0	0	10		0	0	0
7845V/7845I-ENT	0	0	110		0	0	0
GSMCF/IGSMCF Fire Communicator	0	0	10		0	0	0
7847V/7847I-E Internet Communicator	0	0	75		0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0
Add'l Device (enter quant. & currents)	0	0	0	0	0	0	0
[illegible]							
IS215T ☐ LED Active?	0	0	7		0	0	0
IS215TCE	0	0	18		0	0	0
IS2260/IS2260T ☐ LED Active?	0	0	4		0	0	0
IS2460	0	0	9		0	0	0
IS2500LT	0	0	25		0	0	0
IS2535/IS2535T	0	0	20		0	0	0
IS2560/IS2560T	0	0	20		0	0	0
IS2560TC	0	0	25		0	0	0
IS310/IS320 Request to Exit (RTE)	0	0	35		0	0	0
997 Ceiling Mount PIR ☑ LED Active?	1	0	17		17	0	0
998 Wall Mount PIR ☑ LED Active?	3	0	18		54	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
[illegible]							
DT-515	0	0	20	0	0	0	0
DT-6100STC	0	0	35	0	0	0	0
DT-7235T	0	0	20	0	0	0	0
DT-7435/DT-7435C	0	0	30	0	0	0	0
DT-7450/DT-7450MIC	0	0	35	0	0	0	0
DT-7550	0	0	40	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0
Motion Detctrs (enter quant. & currents)	0	0	0	0	0	0	0

POLLING LOOP DEVICES	Enter Quantity	How many powered by 4297?			
4101SN Single Output Relay Module	0	0	7	0	
4190SN Two Zone SIM	0	0	2	0	
4190WH	0	0	2	0	
4191SN-WH	0	0	0.5	0	
4192CP	0	0	0.4	0	
4192SD Photoelectric Smoke Det.	0	0	0.4	0	
4192SDT	0	0	0.4	0	
4193SN Two Zone SIM	23	0	1.5	34.5	
4194 Contact	0	0	1	0	
4196	0	0	1	0	
4209U	0	0	15.5	0	
4275EX Dual PIR ☐ LED Active?	0	0	1	0	
4275EX-SN Dual PIR ☐ LED Active?	0	0	1	0	
4278EX-SN ☐ LED Active?	0	0	1	0	
4293SN	0	0	1	0	
4939SN WH/BR/GY Surf Mt. Cntct.	0	0	1	0	
4944SN Recessed Contact	0	0	1	0	
4945SN-WH	0	0	0.5	0	
4959SN Overhead Door Contact	0	0	0.5	0	
5192SD Smoke Detector	0	0	2.8	0	
5192SDT Smoke Detector with Heat	9	0	2.8	25.2	
998MX PIR ☐ LED Active?	0	0	1	0	
IS2500SN PIR ☐ LED Active?	0	0	1.6	0	
FG-1625SN Glass Break Detector	0	0	1	0	
Quest2260SN ☐ LED Active?	0	0	6	0	
Vplex-VSI Short Isolator	0	0	5	0	
Vistakey	0	0	2	0	
Add'l VPlex (enter qnt'y & current)	0	0	0	0	
Add'l Vplex (enter qnt'y & current)	0	0	0	0	

12V NOTIFICATION DEVICES ON BELL OUTPUT #1	Enter Quantity	How many powered externally?	Alarm Current (Aux)		
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0

12V NOTIFICATION DEVICES ON BELL OUTPUT #2 (IF USED)	Enter Quantity	How many powered externally?	Alarm Current (Aux)		
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0
Enter device name, quant., & current	0	0	0	0	0

12V AUX POWER AND BELL CIRCUIT WIRE RUN DATA								
Panel Aux Power Wire Run (twin lead)	Feet	<Select Wire Gauge>	0.00		0	0.00	12.00	0.00
Panel Bell 1 Wire Run (twin lead)	Feet	<Select Wire Gauge>	0.00		0	0.00	12.00	0.00
Panel Bell 2 Wire Run (twin lead)	Feet	<Select Wire Gauge>	0.00		0	0.00	12.00	0.00

Battery & Power Budget Calculator

Standby/Alarm Durations (from top)	
Battery Standby (hours):	[illegible]
Alarm Duration (minutes):	[illegible]
	1.059
	7.0

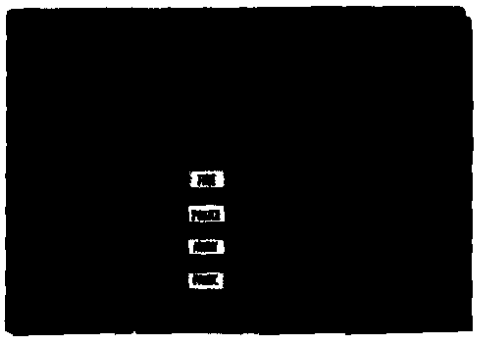
PS24 POWER SUPPLY MODULE, MAXIMUM CAPACITIES

	Panel 12V Standby (mA)	Panel 12V Alarm (mA)	Output A Standby (mA)	Output A Alarm (mA)	Output B Standby (mA)	Output B Alarm (mA)	PS24 PC Board (mA)	Maximum Total Standby Output	Maximum Total Alarm Output	Max. Battery Capacity
■	[illegible]	[illegible]	***570***	***1700***	***570***	***1700***	***40***	***610***	***4180***	***34.4***
	0.0	***0.0***	0	0	0	0	40	40	40	
	890.7	994.7	570.0	1700.0	570.0	1700.0		570.0	4140.0	34.4
24V NOTIFICATION APPLIANCES ***Enter Device Names & Specifications***										
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	
24V Notification Appliance	0	Output A ▾	0	0		0	0	0	0	

24V BELL CIRCUIT WIRE RUN DATA								
PS24 Output A Wire Run (twin lead)	Feet ▾	<Select Wire Gauge> ▾	0.00	[illegible]	0	0.00	24.00	0.00
PS24 Output B Wire Run (twin lead)	Feet ▾	<Select Wire Gauge> ▾	0.00	[illegible]	0	0.00	24.00	0.00

6160CR-2

COMMERCIAL FIRE ALPHA KEYPAD
UL864 REV 9 LISTED



The 6160CR-2 is an addressable remote keypad intended for use in commercial fire applications with Honeywell's commercial fire control panels. The keys are continuously backlit for convenience and easy visibility. The LCD display is backlit only when a key is depressed*, or when the system is in alarm or trouble condition.

*Note: The LCD may be programmed to remain on at all times (see panel instructions for details).

FEATURES

- Four programmable function keys
- Built-in sounder
- Seven Status LEDs
  - Armed (Red)
  - Ready (Green)
  - Power (Green)
  - Fire Alarm (Red)
  - Silenced (Yellow)
  - Supervisory (Yellow)
  - Trouble (Yellow)
- Large easy-to-read display
- Red removable door
- Physical
  5.250" W x 7.437" H x 1.312" D

SPECIFICATIONS

Sounder

- High-quality speaker

Electrical

- 45mA standby 160mA in alarm (sounder, back light and LED on)

Compatibility

- Supports Control Panels
  - VISTA-32FB Rev 5 and higher
  - VISTA-128FBP Rev 4 and higher
  - VISTA-250FBP Rev 4 and higher

UL/CUL and residential Listed for commercial fire and burglary installations. To be employed with manufacturer's listed control units as indicated in the installation instructions.

Product specifications subject to change.

ORDERING

6160CR-2	Commercial Fire Alpha Keypad

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
Melville, NY 11747
1.800.467.5875
www.honeywell.com

Honeywell

L/6160CR2D/D
September 2009

SYSTEM SENSOR

5600 Series Mechanical Heat Detectors

System Sensor's 5600 series mechanical heat detectors offer a low-cost means for property protection against fire, and for non-life-safety installations where smoke detectors are inappropriate.

Features

- Multiple configurations for installations:
  - Single- and dual-circuit models
  - Fixed temp and combination fixed- temp/rate-of-rise 135°F or 194°F ratings.
- Plain housing for residential installations (Model 5601P)
- Easy-to-use terminal screws
- A broad range of back box mounting options:
  - Single gang
  - 3.5" and 4" Octagonal
  - 4" square with square to round plaster ring
- Reversible mounting bracket

Multiple configurations. The 5600 series offers a full-line of configurations to accommodate a broad range of applications. Both single- and dual-circuit models are available for low- and high-temperature ratings with either fixed temperature or combination fixed temperature/rate-of-rise (ROR) activation. The ROR element of the fixed/ROR models is restorable to accommodate field-testing.

Installation flexibility. To satisfy a variety of installation needs, the 5600 series easily mounts to single-gang and octagonal back boxes. And these models accommodate four-square back boxes, when used with a square to round plaster ring. The reversible mounting bracket permits both flush- and surface-mount back box installations.

Visual identification. The 5600 series provides clear markings on the exterior of the unit to ensure that the proper detector is being used. Alphanumeric characters identify the activation method, as well as the temperature rating, in Fahrenheit and Celsius degrees. Fixed temperature models are identified FX, while combination fixed/rate-of-rise units are marked FX/ROR. The 5600 series also provides a post-activation indicator in the form of a collector. When the detector is activated, the collector drops from the unit, making it easy to identify the unit in alarm.

Agency Listings

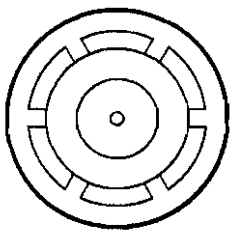
UL LISTED S2101 · FM APPROVED 3016008 · MEA approved 199-03-E · 7270-1209:227

Specifications

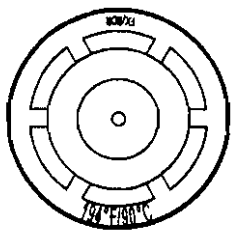
Architectural Engineering Specifications

Mechanical heat detector shall be a System Sensor 5600 series model number _____, listed to Underwriters Laboratories UL 521 for Heat Detectors for Fire Protective Signaling Systems. The detector shall be either a single-circuit or a dual-circuit type, normally open. The detector shall be rated for activation at either 135°F (57°C) or 194°F (90°C), and shall activate by means of a fixed temperature thermal sensor, or a combination fixed temperature/rate-of-rise thermal sensor. The rate-of-rise element shall be activated by a rapid rise in temperature, approximately 15°F (8.3°C) per minute. The detector shall include a reversible mounting bracket for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a square to round plaster ring. Wiring connections shall be made by means of SEMS screws that shall accommodate 14–22AWG wire. The detector shall contain alphanumeric markings on the exterior of the housing to identify its temperature rating and activation method. The rate-of-rise element of combination fixed temperature/rate-of-rise models shall be restorable, to allow for field-testing. The detectors shall include an external collector that shall drop upon activation to identify the unit in alarm.

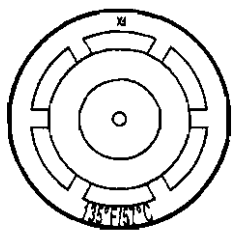
Physical/Operating Specifications	
Maximum Installation Temperature	5601P, 5603, 5621, and 5623: 100°F (38°C) 5602, 5604, 5622, and 5624: 150°F (65.6°C)
Operating Humidity Range	5 to 95% RH non-condensing
Dimensions with mounting bracket	Diameter: 4.57 inches (11.6cm) Height: 1.69 inches (4.3cm)
Alarm Temperature	5601P, 5603, 5621, and 5623: 135°F (57°C) 5602, 5604, 5622, and 5624: 194°F (90°C)
Weight	6 oz. (170 grams)
Rate-of-Rise Threshold	15°F (8.3°C) rise per minute (models 5601P, 5602, 5621, and 5622 only)
Mounting	3½-inch octagonal back box 4-inch octagonal back box Single gang back box 4-inch square back box with a square to round plaster ring
Electrical Specifications	
Operating Voltage / Contact Ratings	6–125VAC / 3A 6–28VDC / 1A 125VDC / 0.3A 250VDC / 0.1A
Input Terminals	14–22 AWG



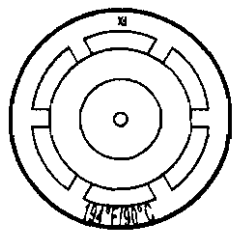
5601P



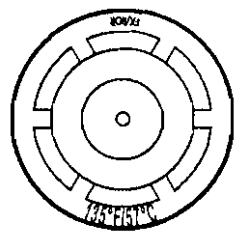
5602, 5622



5603, 5623



5604, 5624



5621

Ordering Information

Model	Circuit	Identification Method on Exterior	Temperature Rating	Activation	UL Protected Spacing - 10 Foot Ceiling*
5601P	Single	None	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet x 50 feet (15.24m x 15.2m)
5602	Single	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet x 50 feet (15.24m x 15.2m)
5603	Single	Lettering	135°F (57°C)	Fixed Temperature	25 feet x 25 feet (7.62m x 7.62m)
5604	Single	Lettering	194°F (90°C)	Fixed Temperature	25 feet x 25 feet (7.62m x 7.62m)
5621	Dual	Lettering	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet x 50 feet (15.24m x 15.2m)
5622	Dual	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet x 50 feet (15.24m x 15.2m)
5623	Dual	Lettering	135°F (57°C)	Fixed Temperature	25 feet x 25 feet (7.62m x 7.62m)
5624	Dual	Lettering	194°F (90°C)	Fixed Temperature	25 feet x 25 feet (7.62m x 7.62m)

*NOTE: Refer to NFPA72 guidelines for spacing reductions when ceiling heights exceed 10 feet.

SYSTEM SENSOR®

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

A05-0351-002 • 11/06 • B1676

BG-12 Series

Manual Fire Alarm Pull Stations

FIRE-LITE ALARMS by Honeywell

Conventional Initiating Devices

General

The Fire-Lite **BG-12 Series** is a cost-effective, feature-packed series of non-coded manual fire alarm pull stations. It was designed to meet multiple applications with the installer and end-user in mind. The BG-12 Series features a variety of models including single- and dual-action versions.

The BG-12 Series provides Fire-Lite Alarm Control Panels (FACPs), as well as other manufacturers' controls, with a manual alarm initiating input signal. Its innovative design, durable construction, and multiple mounting options make the BG-12 Series simple to install, maintain, and operate.

Features

- Aesthetically pleasing, highly visible design and color.
- Attractive contoured shape and light textured finish.
- Meets ADA 5 lb. maximum pull-force.
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Easily operated(single- or dual-action), yet designed to prevent false alarms when bumped, shaken, or jarred.
- PUSH IN/PULL DOWN handle latches in the down position to clearly indicate the station has been operated.
- The word "ACTIVATED" appears on top of the handle in bright yellow, further indicating operation of the station.
- Operation handle features white arrows showing basic operation direction for non-English-speaking persons.
- Braille text included on finger-hold area of operation handle and across top of handle.
- Multiple hex- and key-lock models available.
- U.S. patented hex-lock needs only a quarter-turn to lock/unlock.
- Station can be opened for inspection and maintenance without initiating an alarm.
- Product ID label viewable by simply opening the cover; label is made of a durable long-life material.
- The words "NORMAL" and "ACTIVATED" are molded into the plastic adjacent to the alarm switch (located inside).
- Four-position terminal strip molded into backplate.
- Terminal strip includes Phillips combination-head captive 8/32 screws for easy connection to Initiating Device Circuit (IDC).
- Terminal screws backed-out at factory and shipped ready to accept field wiring (up to 12 AWG/3.1 mm²).
- Terminal numbers are molded into the backplate, eliminating the need for labels.
- Switch contacts are normally open.
- Can be surface-mounted (with **SB-10** or **SB-I/O**) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Backplate is large enough to overlap a single-gang backbox cutout by 1/2" (1.27 cm).
- Optional trim ring (**BG12TR**).
- Spanish versions *(FUEGO)* available (**BG-12LSP, BG-12LPSP**).
- Designed to replace the Fire-Lite legacy **BG-10** Series.
- Models packaged in attractive, clear plastic (PVC), clam-shell-style, Point-of-Purchase packages. Packaging includes a cutaway dust/paint cover in shape of pull station.

Construction

- Cover, backplate and operation handle are all molded of durable polycarbonate material.
- Cover features white lettering and trim.
- Red color matches System Sensor's popular SpectrAlert® Advance horn/strobe series.

Operation

The BG-12 manual pull stations provide a textured finger-hold area that includes Braille text. In addition to PUSH IN and PULL DOWN text, there are arrows indicating how to operate the station, provided for non-English-speaking people.

Pushing in and then pulling down on the handle activates the normally-open alarm switch. Once latched in the down position, the word "ACTIVATED" appears at the top in bright yellow, with a portion of the handle protruding at the bottom as a visible flag. Resetting the station is simple: insert the key, twist one quarter-turn, then open the station's front cover, causing the spring-loaded operation handle to return to its original position. The alarm switch can then be reset to its normal (non-alarm) position manually (by hand) or by closing the station's front cover, which automatically resets the switch.

Specifications

PHYSICAL SPECIFICATIONS:

	pull station	SB-I/O	SB-10
Height	5.5 inches (13.97 cm)	5.601 inches (14.23 cm)	5.5 inches (13.97 cm)
Width	4.121 inches (10.47 cm)	4.222 inches (10.72 cm)	4.121 inches (10.47 cm)
Depth	1.39 inches (3.53 cm)	1.439 inches (3.66 cm)	1.375 inches (3.49 cm)

5200-Adim.ds

ELECTRICAL SPECIFICATIONS:

Switch contact ratings: gold-plated; rating 0.25 A @ 30 VAC or VDC.

ENGINEERING/ARCHITECTURAL SPECIFICATIONS

Manual Fire Alarm Stations shall be non-code, with a key- or hex-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key or hex. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red colored LEXAN (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

***NOTE:** "The words "FIRE/FUEGO" on the BG-12LSP shall appear on the front of the station in white letters, approximately 3/4" (1.905 cm) high.*

Agency Listings and Approvals

The listings and approvals below apply to the BG-12 Series pull stations. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **C(UL)US:** 8711
- **FM Approved**
- **CSFM:** 7150-0075:184
- **MEA:** 67-02-E
- **Patented:** U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

Product Line Information

BG-12S: Single-action pull station with pigtail connections, hex lock.

BG-12SL: Same as BG-12 with key lock.

BG-12: Dual-action pull station with SPST N/O switch, screw terminal connections, *hex lock.*

BG-12L: Same as BG-12 with key lock.

BG-12LSP: Same as BG-12L with English/Spanish *(FIRE/FUEGO)* labeling.

BG-12LOB: Same as BG-12L with "outdoor use" listing. Includes outdoor listed backbox, and sealing gasket.

BG-12LO: Same as BG-12L with "outdoor use" listing. Does not include backbox.

BG-12LA: Same as BG-12L with auxiliary contacts.

BG-12LPS: Dual-action pull station with pre-signal option.

BG-12LPSP: Same as BG-12LPS with English/Spanish *(FIRE/FUEGO)* labeling.

SB-10: Surface-mount backbox, metal.

SB-I/O: Surface-mount backbox, plastic. *(Included with BG-12LOB.)*

BG12TR: Optional trim ring for semi-flush mounting.

17003: Keys, set of two. (Included with key-lock pull stations.)

17007: Hex lock, 9/64". (Included with hex-lock pull stations.)

***NOTE:** For addressable BG-12LX models, see data sheet DF-52013.*

ISO 9001 CERTIFIED QUALITY SYSTEMS

This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

Made in the U.S.A.

For more information, contact Fire-Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.
www.firelite.com

5881ENHC
COMMERCIAL WIRELESS RECEIVER

The new 5881ENHC RF Receiver is designed for use with control panels that are approved for use in commercial fire and/or burglary installations. The receiver recognizes alarm, status and keypad control messages from wireless transmitters operating at 345 MHz. The receiver also features a Spatial Diversity System that virtually eliminates "nulls" and "dead spots" within the coverage area.

FEATURES

- Front and back tamper for commercial fire/burg installations
- One or two receivers can be used to provide redundant coverage or extend coverage in large areas
- Spatial Diversity System virtually eliminates "nulls" and "dead spots" within the coverage area
- Can be mounted remotely, anywhere on the keypad bus, for extended coverage
- Compatible with all 5800 series wireless devices
- Connects to control panel via the keypad bus
- UL listed for Commercial Fire/Burg applications

COMPATIBLE CONTROLS

- VISTA-32FB
- VISTA-128BP
- VISTA-128FBP
- VISTA-250BP
- VISTA-250FBP
- FA1600 series
- FA1700 series

SPECIFICATIONS

Dimensions

- 7-3/8" W x 4-3/8" (10-7/8" with antennas) H x 1-7/16" D
  188mm W x 112mm H (277mm with antennas) x 37mm D

Input Voltage

- 12VDC (from control's keypad terminals)

Current

- 60mA (typical)

Operating Temperature

- 32° F to 122° F (0° C to 50° C)

Interface Wiring

- RED: 12VDC input (+) Aux. power
- GREEN: Data out to control
- YELLOW: Data in from control
- BLACK: Ground (-)

Range

- 200 ft (60m) nominal indoors from wireless transmitters (the actual range to be determined with the security system in the Test mode)

Installation

- See product installation instructions for details on programming and mounting

UL Listings

- Commercial Fire UL 864
- Household Fire UL 985
- Household Burg UL 1023
- Commercial Burg UL 365, UL 609, UL 1076, UL 1610
- FM
- MEA
- CSFM

ORDERING

5881ENHC Commercial Wireless Receiver

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747

www.honeywell.com

Honeywell

L/5881ENHC/0
October 2008

FCPS-24FS8

8-Amp, 24-Volt Power Supply

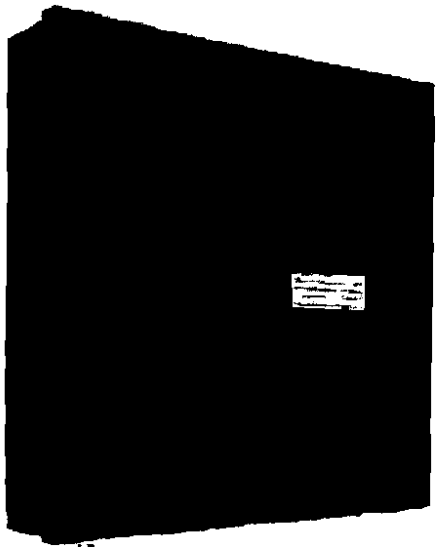
FIRE-LITE ALARMS by Honeywell

Power Supplies/Accessories

General

The **Fire-Lite FCPS-24FS8(C/E)** is a compact, cost-effective, 8-amp remote power supplies with battery charger. The FCPS-24FS8C/E) may be connected to any 12 or 24 volt fire alarm control panel (FACP) or may stand-alone. Primary applications include notification appliance (bell) circuit (NAC) expansion (to support ADA requirements and NAC synchronization) or auxiliary power to support 24 volt system accessories. The FCPS provides *regulated and filtered* 24 VDC power to four notification appliance circuits configured as either two Class B (Style Y) and Class A (Style Z, with ZNAC-4 option module) or four class B only. Alternately, the four outputs may be configured as any combination of resettable/non-resettable power outputs (optimal for powering four-wire smoke detectors. The FFCPS-24FS8(C/E) also contains a battery charger capable of charging up to 18.0 Amp hour batteries. FCPS-24FS8C/E) is ULC-listed.

***NOTE:** Unless otherwise specified, the term FCPS-24FS8 used in this document refers to the standard FCPS-24FS8, FCPS-24FS8C, FCPS-24FS8E*



Features

- UL-Listed Notification Appliance Circuit (NAC) synchronization using System Sensor, Wheelock, or Gentex "Commander^{2}" appliances.
- Operates as a "sync-follower" or as a "sync-generator" (default). *See note on page 2.*
- Contains two fully-isolated input/control circuits - triggered from FACP NAC (NAC expander mode) or jumped permanently "ON" (stand-alone mode).
- Two Class B (Style Y) or Class A (Style Z, with ZNAC-4 module) NACs (circuits 1 & 3)
- 8-amp full load output, with 3 amps maximum/circuit, in NAC expander mode (UL 864).
- 6-amp continuous output in stand-alone mode (UL 1481).
- Compatible with coded inputs; signals passed through.
- Optional power-supervision relay (EOLR-1).
- In stand-alone mode, output power circuits may be configured as: resettable, (reset line from FACP required), non-resettable, or a mix of two and two.
- Fully regulated and filtered power output - optimal for powering four-wire smoke detectors, annunciators, and other system peripherals requiring regulated/filtered power.
- Power-limiting technology meets UL power-limiting requirements.
- Form-C normally-closed trouble relay.
- Fully supervised power supply, battery, and NACs.
- Selectable earth fault detection.
- AC trouble report selectable for immediate 2-hour delay.
- Works with virtually any UL 864 fire alarm control which utilizes an industry-standard reverse-polarity notification circuit (including unfiltered and unregulated bell power).
- Requires input trigger voltage of 9 - 32 VDC.
- Self-contained in compact, locking cabinet - 15"H x 14.5"W x 2.75"D (cm: 38.1H x 36.83W x 6.985D).
- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.
- Battery charger may be disabled via DIP switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1mm^{2}) wire.

Specifications

Primary (AC) Power:

- FCPS-24FS8: 120 VAC, 60 Hz, 3.2A maximum.
- FCPS-24FS8/E: 240 VAC, 50 Hz, 1.6A maximum.
- Wire Size: minimum #14 AWG (2.0mm^{2}) with 600 V insulation.

Control Input Circuit:

- Trigger Input Voltage: 9 to 32 VDC.
- Trigger Current: 2.0 mA (16 - 32 V); Per Input: 1.0 mA (9 - 16 V).

Trouble Contact Rating: 5 A at 24 VDC.

Auxiliary Power Output: Specific application power 500 mA maximum.

Output Circuits:

- +24 VDC filtered, regulated.
- 3.0 A maximum for any one circuit.
- Total continuous current for all outputs (stand-alone mode):
  – FCPS-24FS8: 6.0 A maximum.
- Total short-term current for all outputs (NAC expander mode):
  – FCPS-24FS8: 8.0 A maximum.

Secondary Power (Battery) Charging Circuit:

- Supports lead-acid batteries only.
- Float-charge voltage: 27.6 VDC.
- Maximum current charge: 250 mA.
- Maximum battery capacity: 7.0 AH.

Applications

Example 1: Expand notification appliance power an additional 8.0 A. Use up to four Class B (Style Y) outputs or four Class A (Style Z) outputs (using ZNAC-4). For example, the FACP notification appliance circuits will activate the FCPS when reverse-polarity activation occurs. Trouble conditions on the FCPS are sensed by the FACP through the notification appliance circuit.

Example 2: Use the FCPS to expand auxiliary regulated 24-volt system power up to 6.0 A. Both resettable and non-resettable power options are available. Resettable outputs are created by connecting the resettable output from the FACP to one or both of the FCPS inputs.

Example 3: Use addressable control modules to activate the FCPS instead of activating it through the FACP notification appliance circuits. This typically allows for mounting the FCPS at greater distances* away from the FACP while expanding system architecture in various applications.

For example, an addressable control module is used to activate the FCPS, and an addressable monitor module is used to sense FCPS trouble conditions. Local auxiliary power output from the FCPS provides power to the addressable control module.

***NOTE:** Addressable FACPs are capable of locating control and monitor modules at distances of up to 10,000 feet (3,048 meters).*

Sync Follower/Generator Note

In some installations, it is necessary to synchronize the flash timing of all strobes in the system for ADA compliance. Strobes accomplish this by monitoring very short timing pulses on the NAC power which are created by the FACP. When installed at the end of a NAC wire run, the FCPS-24FS8 can track (i.e. "follow") the strobe synchronization timing pulses on the existing NAC wire run. This maintains the overall system flash timing of the additional strobes attaches to the FCPS.

When the FCPS-24FS8 is configured (via DIP switch settings) as a "sync follower," the FCPS's NAC outputs track the strobe synchronization pulses present at the FCPS's sync input terminal. The pulses originate from an upstream FACP or other power supply.

When the FCPS-24FS8 is configured (via DIP switch settings) as a "sync generator," the FCPS's sync input terminals are not used. Rather, the FCPS is the originator of the strobe synchronization pulses on the FCPS's NAC outputs. In "sync generator" mode, the sync type (System Sensor, Wheelock, or Gentex) is selectable via DIP switch settings.

Standards and Codes

The FCPS-24FS8 complies with the following standards:

- NFPA 72 National Fire Alarm Code.
- UL 864 Standard for Control Units for Fire Alarm Systems (NAC expander mode).
- UL 1481 Power Supplies for Fire Alarm Systems.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S2424
- **ULC Listed:** S2424
- **CSFM Approved: 7315-0075:208**
- **MEA:** 219-02E
- **FM Listed**

Ordering Information

FCPS-24FS8: 6.0 A, 120 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

FCPS-24FS8 is ULC-listed.

FCPS-24FS8E: 6.0 A, 240 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

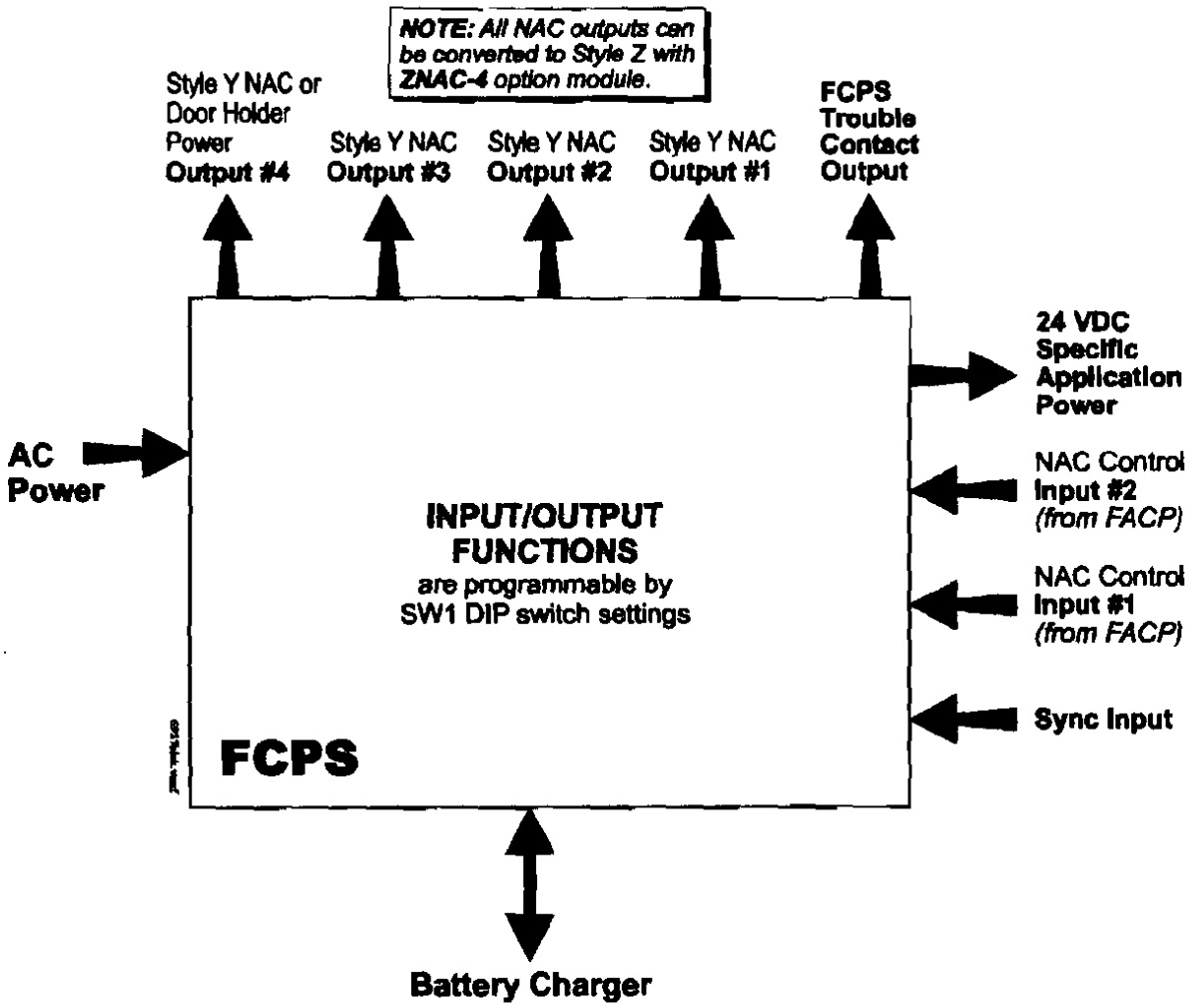
ZNAC-4: Class A (Style Y) NAC option module.

EOLR-1: 12/24 VDC end-of-line relay for monitoring four-wire smoke detector power.

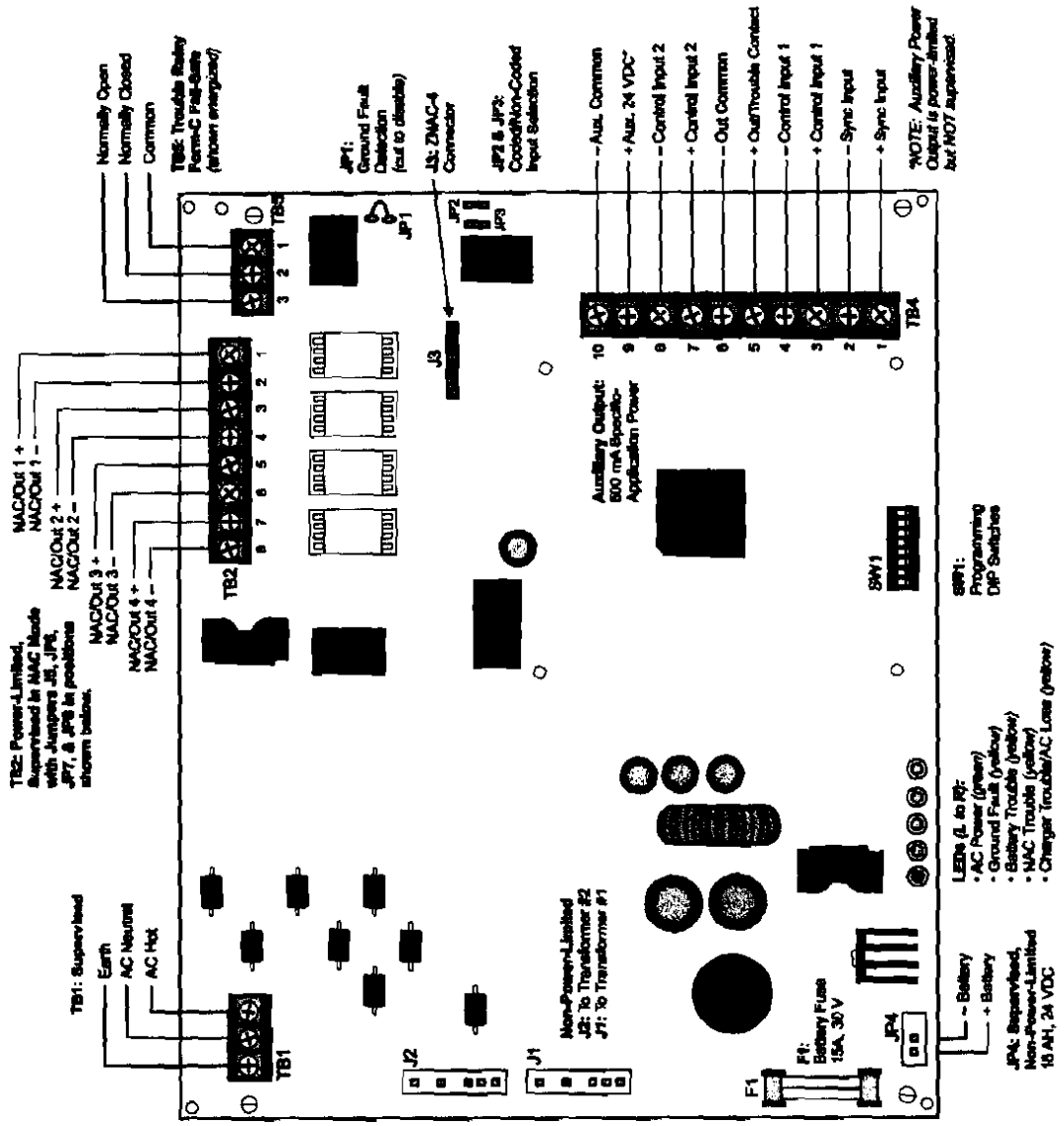
BAT-1270: Battery, 12-volt, 7.0 AH (two required).

PS-1270: Battery, 12-volt, 7.0 AH (two required).

90298: Optional module mounting kit, is required to install an addressable module on the power supply main circuit board.



Simplified Block Diagram



Board Layout

Jobsite Information: [redacted]

FCPS-24FS6 / 8 Battery Calculation

[redacted]

Regulated Load in Standby

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board	1	X	0.065	=	0.065
Power Supervision Relays	[redacted]	X	0.025	=	0
Auxiliary Current Draw from TB4 Terminals 9 & 10	[redacted]	X	[redacted]	=	0
			STANDBY LOAD	=	0.065

Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board without AC	1	X	0.145	=	0.145
Power Supervision Relays	[redacted]	X	0.025	=	0
Auxiliary Current Draw from TB4 Terminals 9 & 10	[redacted]	X	[redacted]	=	0
NAC / Output # 1	[redacted]	X	[redacted]	=	9
NAC / Output # 2	[redacted]	X	[redacted]	=	6.3
NAC / Output # 3	[redacted]	X	[redacted]	=	2.7
NAC / Output # 4	[redacted]	X	[redacted]	=	0
			ALARM LOAD	=	18.145

Battery Amp Hour Calculation

Standby Load Current (Amps)		Required Standby Time (Typically 24 or 60 *Hours*)		
0.065	X	[redacted]	=	1.56 AH
Alarm Load Current (Amps)		Required Alarm Time (Typically 5 or 10 *Minutes*)		
18.145	X	[redacted]	=	3.02 AH
		Sub Total Standby / Alarm Amp Hours		4.58 AH
		Multiply by the Derating Factor	X	1.2 *
		Total Ampere Hours Required	=	**6 AH**

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

Jobsite Information: [redacted]

FCPS-24FS6 / 8 Battery Calculation

[redacted]

Regulated Load in Standby

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board	1	X	0.065	=	0.065
Power Supervision Relays	[redacted]	X	0.025	=	0
Auxiliary Current Draw from TB4 Terminals 9 & 10	[redacted]	X	[redacted]	=	0
			STANDBY LOAD	=	**0.065**

Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board without AC	1	X	0.145	=	0.145
Power Supervision Relays	[redacted]	X	0.025	=	0
Auxiliary Current Draw from TB4 Terminals 9 & 10	[redacted]	X	[redacted]	=	0
NAC / Output # 1	[redacted]	X	[redacted]	=	10.8
NAC / Output # 2	[redacted]	X	[redacted]	=	7.2
NAC / Output # 3	[redacted]	X	[redacted]	=	3.6
NAC / Output # 4	[redacted]	X	[redacted]	=	0
			ALARM LOAD	=	**21.745**

Battery Amp Hour Calculation

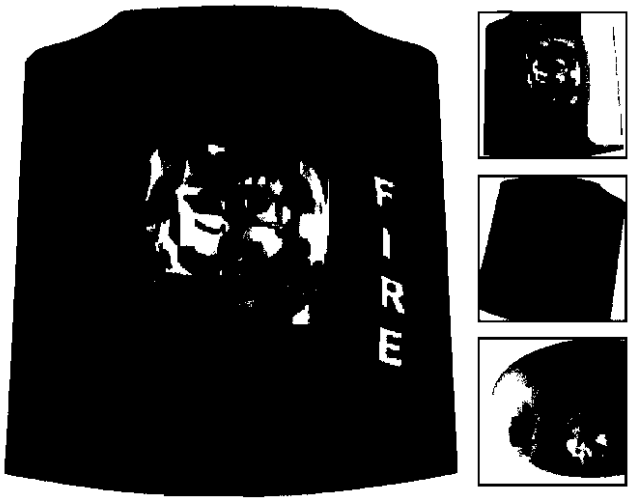
Standby Load Current (Amps)		Required Standby Time (Typically 24 or 60 *Hours*)		
0.065	X	[redacted]	=	1.56 AH
Alarm Load Current (Amps)		**Required Alarm Time (Typically 5 or 10 *Minutes*)**		
21.745	X	[redacted]	=	3.62 AH
		Sub Total Standby / Alarm Amp Hours		5.18 AH
		Multiply by the Derating Factor	X	1.2 *
		Total Ampere Hours Required	=	**7 AH**

* Derating Factor required to compensate for the *non-linear* discharge characteristic of a battery.

SYSTEM SENSOR®

Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance selectable-output horns, strobes, and horn strobes are rich with features guaranteed to cut installation times and maximize profits.



SPECTRAlert ADVANCE

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall and ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with existing SpectrAlert products
- Compatible with MDL sync module

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. Furthermore, a universal mounting plate with an onboard shorting spring tests wiring continuity before the device is installed, protecting devices from damage.

In addition, field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections enables installers to easily adapt devices to suit a wide range of application requirements.

Agency Listings

S4011 (chimes, horn strobes, horns)
S5512 (strobes)

3023572

MEA 452-05-E

7125-1653:188 (indoor strobes)
7125-1652:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 1⅞-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync-Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync-Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync-Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4⁹⁄₁₆ × 4⁹⁄₁₆ × 2⅛-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Wall-Mount Dimensions (including lens)	5.6" L × 4.7" W × 2.5" D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6" L × 4.7" W × 1.3" D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9" L × 5.0" W × 2.2" D (151 mm L × 128 mm W × 56 mm D)
Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)	7.1" diameter × 2.2" high (180 mm diameter × 57 mm high)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7" L × 4.8" W × 0.35" D (145 mm L × 122 mm W × 9 mm D)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9" diameter × 0.35" high (175 mm diameter × 9 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 1S and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS): 2-Wire Horn Strobe: Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS): 2-Wire Horn Strobe: High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

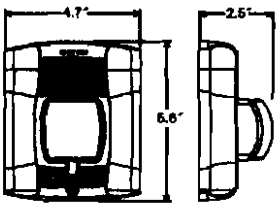
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

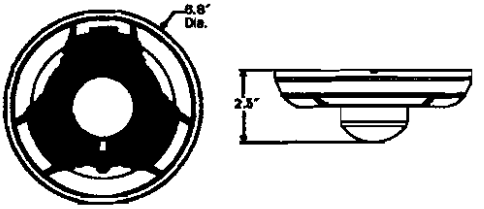
			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobe.

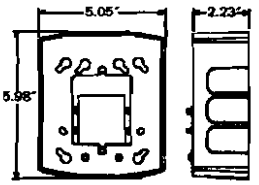
SpectrAlert Advance Dimensions



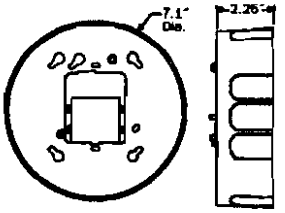
Wall-mount horn strobes



Ceiling-mount horn strobes



Wall back box skirt



Ceiling back box skirt

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R*†	2-Wire Horn Strobe, Standard cd‡, Red
P2RH*	2-Wire Horn Strobe, High cd, Red
P2W*	2-Wire Horn Strobe, Standard cd, White
P2WH*	2-Wire Horn Strobe, High cd, White
P4R*	4-Wire Horn Strobe, Standard cd, Red
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR*†	Strobe, Standard cd, Red
SRH*†	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH	2-Wire Horn Strobe, High cd, Red
PC2W*†	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R	4-Wire Horn Strobe, Standard cd, Red
PC4RH	4-Wire Horn Strobe, High cd, Red
PC4W	4-Wire Horn Strobe, Standard cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH	Strobe, High cd, White
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P

† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.

SYSTEM SENSOR®

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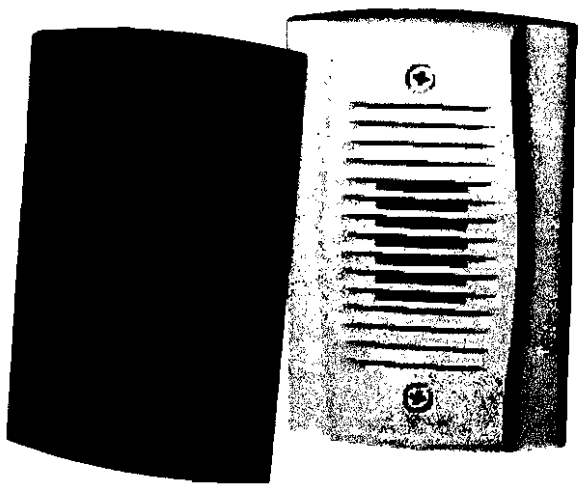
SYSTEM SENSOR®

Mini-Horns

The SpectrAlert® Advance series of mini-horn sounders are designed to simplify installations to provide primary and secondary signaling for fire and security applications.



SPECTRAlert ADVANCE

Features

- 12 and 24V operation
- High and low volume settings
- Temporal and non-temporal tones
- Mounts to single gang back box
- Compatible with MDL sync module
- Mechanically and electrically compatible with PA400 series Mini-Alert™ sounders

The MHR and MHW mini-horns operate at 12 and 24 volts and are ideal for hotel, motel or residential fire system applications, where a smaller notification device is desired. The mini-horns offer high and low volume settings, and temporal or non-temporal tones. The horns can be mounted to single gang back boxes for aesthetically sensitive applications. Synchronization is also provided when using the MDL module.

The MHR and MHW mini horns can operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified, unfiltered power supply. They are listed to Underwriter's Laboratories Standard UL 464 for fire protective signaling systems.

Agency Listings

UL LISTED S4011 | FM APPROVED 3028007 | MEA approved MEA7-07-E | 7135 1653 196

SpectrAlert® Advance Mini-Horn Specifications

Architectural Engineering Specifications

Mini-horns shall be a System Sensor Model MHR or MHW capable of operating at nominal 12 or 24VDC and shall mount to a single gang back box. Mini-horn shall be listed to Underwriter's Laboratories Standard UL464 for fire protective signaling systems. Mini-horns shall operate between 32 and 120 degrees Fahrenheit from a regulated DC, or full-wave rectified, unfiltered power supply. When used with the Sync-Circuit™ Module, 12-volt rated notification appliance circuit outputs shall operate between nine and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts.

Physical Specifications	
Dimensions	4.6"L × 2.9"W × .45"D
Weight	2.67 oz
Operating Temperature Range	32°F to 120°F (0°C to 49°C)
Mounting	Surface: single-gang back box Flush: 4" × 4" BBD deep back box (2¾" deep)

Electrical Specifications	
Input Terminals	12 to 18 AWG
Nominal Voltage	Regulated 12DC/FWR or regulated 24DC/FWR
Operating Voltage	8–33
Operating Voltage with MDL	9–33

UL Sound Output and Current Draw Data

Sound Output dBA

Switch Setting	Pattern	Output Level	8–17.5 VDC	8–17.5 VFWR	Nominal 12 VDC	Nominal 12 VFWR	16–33 VDC	16–33 VFWR
1	Temporal	High	68	67	71	70	78	76
2	Temporal	Low	66	65	69	68	76	75
3	Non-temporal	High	72	71	75	74	80	79
4	Non-temporal	Low	70	69	73	72	78	77

Sounder Current Draw in AMPS

			8–17.5 Volts		16–33 Volts	
Switch Position	**Sound Pattern**	**Volume**	DC	FWR	DC	FWR
1	Temporal	High	12	10	17	15
2	Temporal	Low	10	9	14	13
3	Non-temporal	High	22	17	29	25
4	Non-temporal	Low	17	13	21	19

Ordering Information

Part No.	Description
MHR	Mini-Horn, Red
MHW	Mini-Horn, White

SYSTEM SENSOR®

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